



District Executive's Message

Each year PennDOT encourages high school students across the commonwealth to participate in PennDOT's Innovations Challenge. Every year a different challenge is proposed to students. This year's challenge asked students to take Pennsylvania's diverse demographics into consideration, develop a comprehensive and cost-effective public engagement strategy, beyond the current public engagement procedures, outlining innovative technologies and tools that PennDOT can implement to more effectively engage and connect with all age groups during the transportation planning and project development process.

District 12 received 11 submissions; Norwin High School had 10 teams made up of 2-3 students per team and Waynesburg Central High School had 1 team made up of 4 students. Once our District received all the submissions, we had a group of judges that evaluated each submission and narrowed it down to 5 finalists. The 5 finalists consisted of 4 Norwin High School teams and 1 Waynesburg Central Team. The 5 finalists were contacted and asked to prepare an in-person presentation to present in front of the same judges.

February 22, 2022, we had the 5 Finalists come to the District Office to present their innovations. We had each group present in front of the judges and the judges asked them questions on their innovation. While one team presented the other students attended a Teen Driver Safety Seminar. The Highway Safety Network and Pennsylvania State Police had activities to educate students on the importance of safe driving. The students were provided lunch and were given information on employment and career opportunities with PennDOT. Barry Lyons, P.E. had a presentation on navigating thru Diverging Diamond Interchanges and Roundabouts for the students.

Lastly, Steven Greathouse the Roadway Programs Coordinator for Fayette County Maintenance Office put together a presentation that consisted of all the materials and mixtures that we utilize in the winter for snow removal. The materials that we used were in mason jars so the students could see them. Steve explained the science behind its use and how it works with other materials as it is applied to our roadways. Each student was given a tour of our garage area to finish out the day and was shown how a truck and loader operate and the safety hazards associated with each piece of equipment. They were very enthusiastic, and the Fayette County Maintenance staff was happy to give them a little knowledge of what PennDOT does.

Our judges selected a team from Norwin High School as our District finalist and to move on to the final competition on April 12th. The winning team from Norwin's innovation was to use "Google Ads" as a communication method. On April 12th a competition with each District finalist across the state was held and District 5 had the winning team. The team was from Monroe Career and Technical Institute and proposed a solution called PaE3. It is an innovative way of using existing technologies to approach the need for communication between PennDOT and its key stakeholders and get citizens involved in PennDOT's planning and project development process.

District 12 looks forward to this annual competition as it is a great way to get the youth involved with the future of transportation.

Sincerely,

William L. Kovach, P.E.
District Executive



Department Force Bridge Project Route 2053 Weaver School Rd. – Washington County

As a continuation of the last Department Force Bridge article featured in the March 2022 Progress Report, this article will concentrate on a project completed by the Washington County bridge crew. As was mentioned in the first article of this four-part series, our District 12 Department Force Bridge crews complete a total of 12 projects per year. Starting in early-mid April, each of the four counties in District 12 starts the first of three projects for the construction season.

This second article is concentrating on Route 2053 (Weaver School Road) in Washington County. This was the Washington County bridge crew's first project of 2021, which started at the beginning of April. As shown in the photo to the right, the fascia beam on one side of the bridge was in poor enough condition to warrant closing a lane. The first steps of the process were the demolition of a single lane bridge and excavation for a new precast box culvert structure with large u-wing walls.

Two largest challenges with this project were the space available for the crane and the placement of the large wing walls. A 400-ton crane with a super lift add-on was necessary because of the weight of the u-wings as well as the radius of the lifts, which was so exaggerated due to the skew of the box structure. Because the crane must essentially stay straight on the road, the skew of the box relative to the road causes one of the wings opposite of the



crane to be very far away, and in this case the u-wings were very heavy pieces to be set. The second largest challenge of the project stemmed from the u-wings once again, with the setting and roadway alignment being a challenge.

The required crane for Weaver School Road was a 400-ton Liebherr 1400. This crane had to be capable of reaching out 105' with a u-wing that weighed 75,000 pounds! The outriggers for this crane took up a 40' x 40' square, while the rest of the front end extended another 20' beyond that. The crane required seven truckloads of counterweights totaling around 280,000 pounds as well as the super lift assembly, which takes two additional truckloads itself. The crane also stood nearly 150' high when assembled and had to be able to fully swing to remove each piece from a truck in front of it. This must all be prepared for months in advance as tree trimming, clearing, and land development must take place to accommodate something so high and heavy. Another issue with such a large crane is all the staging required for the nine tractor trailers that accompany the crane itself. A lane coming into the crane must always remain open so that the precast pieces can get close enough for rigging. You can see crane in the photo to the left.

Once all the box pieces were set, the second largest challenge was placing the huge u-wings so that the elevation and alignment matched that of the precast curbs on the box. What makes this so important is that for a box with u-wings and a precast curb, the public sees only the pavement and curb lines in the end, so it is the key reflection of the work done. Due to the shape of the u-wings and the way they attach to the box, it is difficult to get them set

PROGRESS REPORT - PennDOT District 12

FAYETTE, GREENE, WASHINGTON & WESTMORELAND COUNTIES

TOM WOLF, GOVERNOR | YASSMIN GRAMIAN, P.E., SECRETARY

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appropriately. They naturally want to tip over and not pick evenly, which in turn causes problems when trying to slide them against the rest of the structure. Following the setting, the u-wing challenge was not over as this box required cast-in-place cheek walls due to skewed angle of contact the u-wings make with the barrel of the culvert. Cheek walls require complex concrete formwork that the Washington County bridge crew has learned to handle well. The third photo shows typical cheek wall formwork.

Following this setting, the crew then had to grout the inlet and outlet of the box to eliminate water from intruding under the structure and creating a short circuiting of flow. The crew also backfilled and compacted the entire excavation with stone, reestablished the streambed, rock lined the streambanks where necessary, and prepared the roadway area for new asphalt. Following asphalt, guiderail, and cleanup by the bridge crew, an outstanding new bridge was left behind.



The Department Force ten-year program started in 2015 and has covered nearly 90 projects since its inception. As earlier mentioned, not all projects are box culvert bridge replacements; however, on average, a single box culvert project saves the Commonwealth of PA between \$500-600k by using owned equipment and our own personnel. Over the last 7 years, the knowledge gained by the county bridge crews has allowed them to become far more efficient, thus allowing bridge maintenance to tackle more difficult repairs and new construction as well as saving the Commonwealth millions per year.

**MAINTAIN
A SAFE SPEED**

and following distance when traveling through a work zone.

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DEPARTMENT OF TRANSPORTATION



PennDOT Announces 2021 Statewide Traffic Fatalities

The Pennsylvania Department of Transportation (PennDOT) recently announced that in 2021, statewide traffic deaths increased to 1,230 from 1,129 in 2020.

Pennsylvania roadway deaths were up about 9% in 2021. This increase is in line with a recently released report from the [National Highway Traffic Safety Administration](#), projecting a national increase of approximately 12% in the first nine months of 2021.

“Safety on our roadways is a shared responsibility,” said PennDOT Secretary Yassmin Gramian. “Whether you are a driver, passenger, pedestrian, or bicyclist, we can all do our part to prevent crashes and fatalities. Buckle up every time you are in a vehicle. Always cross the road at an intersection or crosswalk. Always wear a helmet when riding a motorcycle or bicycle. Never drive, ride, or walk impaired or distracted. Let’s work together to reduce traffic deaths, because even one fatality is one too many.”

Pennsylvania’s updated [2022 Strategic Highway Safety Plan \(SHSP\)](#) sets the groundwork for progressing “Toward Zero Deaths” by focusing on both infrastructure-based strategies and behavior change to reduce the frequency and severity of crashes. This is done by implementing roadway designs that emphasize minimizing the risk of injury to all road users, reducing inequities in our transportation network, and using cost-effective, data-driven methods.

The SHSP seeks to substantially reduce traffic related fatalities and serious injuries by addressing several safety focus areas, including three priority emphasis areas: lane departure crashes, impaired driving, and pedestrian safety.

In 2021, fatalities in crashes involving lane departure increased to 596, up from 551 in 2020, accounting for nearly half of highway fatalities across the state. Strategies to combat these crashes are aimed at keeping vehicles on the roadway, within the proper lanes of travel, and include low-cost safety improvements such as centerline or shoulder rumble strips, high friction surface treatments, and cable median barrier. Speeding, impaired, and distracted driving are leading factors in lane departure crashes; therefore, behavioral safety efforts are equally important.

Fatalities in crashes involving impaired driving decreased from 471 in 2020 to 450 in 2021. While impaired driving fatalities have decreased over the last 15 years, they remain high, accounting for more than 35% of fatalities in 2021. Impaired driving consists of a driver under the effect of alcohol, drugs, medication, or any combination of those. Driving while impaired by any substance (legal or illegal) puts all roadway users in harm’s way. Pennsylvania takes a proactive approach to combat impaired driving, focused on enforcement and educational programs as a means of prevention, as well as legislative efforts and emerging technologies to aid in detection.

Pedestrian fatalities increased to 182, up from 146 in 2020. Pedestrian fatalities accounted for 15% of fatalities statewide in 2021. Active transportation is on the rise and being promoted across all areas of the state from urban centers to small rural towns, resulting in increased pedestrian activity making it more likely to have collisions with motor vehicles. PennDOT is making accommodations for active transportation a routine and integral element of planning, project development, design, construction, operations, and maintenance.

“Transportation needs to work for everyone – no matter who you are, no matter how you travel,” said Gramian. “We continue to work with our partners to decrease fatalities through educational outreach, the latest innovations, effective enforcement, and low-cost safety improvements.”

Other crash types with notable increases in fatalities in 2021 include:

- Crashes involving a 16 to 17-year-old driver – 45 fatalities, up from 26 in 2020.
- Crashes involving aggressive driving – 126 fatalities, up from 91 in 2020.
- Motorcyclist fatalities – 226, up from 217 in 2020.
- Crashes involving heavy trucks – 156 fatalities, up from 122 in 2020.
- Unrestrained fatalities – 378, up from 348 in 2020.

According to national data, driver behavior is a factor in more than 90% of crashes. For this reason, PennDOT focuses on data trends to drive enforcement and education improvements and invests approximately \$19 million annually in federal grant funds statewide to support these behavioral safety programs.

In addition to behavioral safety, PennDOT focuses on infrastructure improvements to roadways in an effort to further reduce fatalities and serious injuries. Approximately \$450 million in Federal Highway Safety Improvement Program funds has been invested in 328 unique safety projects from 2017 to 2021. During that same timeframe, another \$50 million of state funds was invested in low-cost safety improvements at thousands of locations. Examples of low-cost safety countermeasures include centerline and edge-line rumble strips and high friction surface treatments.

For more information on reportable crash data, visit [PennDOT’s Pennsylvania Crash Information Tool \(PCIT\)](#) website, www.crashinfo.penndot.gov. Under “Crash Downloads,” the “Reportable Crash Fatality Statistics” spreadsheet is updated with 2021 fatalities; 2021 crash statistics and suspected serious injury statistics are not yet available. The “Custom Query Tool” and additional crash downloads will be available June 1.



Projects to be Bid

Tentative Lettings May 12, 2022

12-22-RPM — This project is for the replacement/installation of reflective pavement markers throughout the district.

12-22-GR1 — This project is for performing guide rail repairs and replacements on various state routes in various locations in Fayette County.

12-22-GR2 — This project is for performing guide rail repairs and replacements on various state routes in various locations in Greene County.

12-22-GR4 — This project is for performing guide rail repairs and replacements on various state routes in various locations in Washington County.

12-22-GR5 — This project is for performing guide rail repairs and replacements on various state routes in various locations in Westmoreland County.

Projects that Have Been Bid

Bids April 14, 2022

SIP 12-22-S11 — This is for the resurfacing of various state routes in various municipalities throughout Fayette County. The apparent low bidder on this \$3,542,130.30 is Tresco Paving Corporation.

Bids April 21, 2022

Interstate 70 @ Route 51 Interchange — This project is the widening and reconstruction of Interstate 70 along with reconstruction of the Route 51 Interchange (Exit 46) to eliminate the substandard cloverleaf interchange and replace it with a Diverging Diamond Interchange in Rostraver Township, Westmoreland County. Project involves several intersecting roads including the relocation of Finley Road to form plus intersection with PA 981 and construction of three cul de sacs. Project includes work to rehabilitate or replace several structures including the replacement of the bridge carrying Route 51 over Interstate 70. Additionally, the project will include stormwater management basins, traffic signals, new interchange signing including overhead sign structures, pavement markings, guide rails, drainage, highway lighting, ITS relocation work, and other miscellaneous construction. The apparent low bidder on this \$120,661,976.77 is Golden Triangle Construction Company, Inc.

Bids April 28, 2022

Westmoreland County Red Signal Ahead Signage — This project will target signalized intersections where there is a crash history due to sight distance approaching the signalized intersection along with a crash pattern of rear ends due to high speed and distance between signals at various locations throughout Westmoreland County. The apparent low bidder on this \$387,920.69 is Bruce – Merrilees Electric Company.

WHY DO WE USE OIL AND CHIP INSTEAD OF REPAVING ROADS?

Seal coating (PDF), more commonly known as oil and chip or tar and chip, is used to extend the life of lower-volume roads for another three to five years. The cost to reconstruct one of these roads is \$910,000 per mile. To resurface, it costs \$101,400 per mile. And to seal coat, it's "only" \$24,700 per mile. Ideally, roads are seal coated every four to seven years and given a complete structural resurfacing every 15-20 years. PennDOT recently launched its Road Maintenance and Preservation, or Road MaP program (PDF), which will help us use multiple rehabilitation strategies to address nearly 6,900 miles of low-volume roads that are out of cycle.



PennDOT District 12 Jeanette/ Hempfield Congestion Mitigation and Air Quality (CMAQ)

PennDOT District 12-0 is pleased to announce the substantial completion of the State Route 30 Signal Upgrade Project in Hempfield Township. The core work of this project is upgrading the traffic signals within the Route 30 corridor from Possum Hollow Road/West Penn Drive to North Greengate Road/Tollgate Hill Road in Hempfield Township to an Adaptive Traffic Control Signal System (ATCS).

What is Adaptive Traffic Control Signal System and what does it do? Adaptive Traffic Control System (ATCS) is a traffic management strategy in which a corridor of traffic signals are connected via internet connection and controlled by a software program that selects timings and phases based on the demand at each approach, of each intersection. The signals become efficiently coordinated to move traffic along the mainline, yet still serve the side street traffic, and recycle green time from movements that can be skipped and giving that green time to high demand movements. The signals no longer follow a time-of-day timing plan, and can selectively choose phases and maximum green times, and change them as necessary on every cycle. The traffic signals' timing changes or adapts based on actual traffic demand. To put it in a simple way, it is a system that adapts to the current traffic rather than to manage the traffic by set timings. For example, traffic signals will adjust their timing of the green light to match the current traffic conditions on the roadway. It is constantly collecting data about approaching vehicles and creating new timing sequences to match. When working properly, this technology can save commute time, save money in less idle time in your car, and improves safety with better flow and less congestion.

The New Adaptive Control Traffic Signal System are at the following locations:

- Route 30 and Township Road-673 (Possum Hollow Road)/Route 4060 (West Penn Drive)
- Route 30 and Route Lowry Avenue/Route 4006 (Lewis Avenue)/Twp Road 540 (Beaver Road)
- Route 30 and Route 4008 (Pennsylvania Boulevard)
- Route 30 and Route 4006 (Agnew Road)
- Route 30 and Hempfield Pointe Plaza/Private Drive
- Route 30 and Route 0066 Southbound Ramps 'BB' and 'CC'
- Route 30 and Route 0066 North bound Ramps 'AA' and 'DD'
- Route 30 and Hempfield Boulevard/Hempfield Square
- Route 30 and Township Road-644 (West Hills Drive)/Greengate Centre Drive West
- Route 30 and Route 3099 (South Greengate Road)/Greengate Centre Drive East
- Route 30 and Route 4002 (North Greengate Road)/Route 3026 (Tollgate Hill Road)

In addition, the project involved a full replacement of the traffic signal at the intersection of SR 0030 and North Greengate/Tollgate Hill Road. Minor traffic signal upgrades included new controllers, radar detection systems, vehicular/pedestrian signal heads, and emergency preemption systems. The project also included upgrades to select ADA Ramp facilities, updates to guide rail end treatments and replacement of all signing within the corridor and other miscellaneous construction.

As for most projects working in or around major highways in the Commonwealth, consideration of the 35,000 average daily travelers on Route 0030 had to be planned for. To reduce work related accidents and to prevent major backups, work was performed during off peak hours of the day. With proper planning, there was little, or no congestion and traffic complaints were minimal. Some night work to saw-cut existing ADA Ramps was also performed to help minimize impacts to the community and benefit the schedule.

Many of the businesses and/or stakeholders were very pleased with work performed and with the communication to address the concerns they had.

Bronder Technical Services was the prime contractor on this \$2,500,000.00 project. Due to delay in acquiring data drops from Verizon, the adaptive system will not be operational until the Spring of 2023. Although, the signals throughout the corridor are in place and functioning utilizing coordinated timings until the system can be activated.





Federal REAL ID Enforcement Begins May 3, 2023

With the one-year countdown beginning for the federal enforcement of REAL ID for commercial domestic air travel and other federal purposes, the Pennsylvania Department of Transportation (PennDOT) joined the Transportation Safety Administration (TSA) and Philadelphia International Airport officials to remind Pennsylvania residents who want REAL ID-compliant driver's licenses and photo ID cards and have not yet gotten one to gather the needed documents now to ensure they leave plenty of time to get their REAL ID before the federal enforcement date.

To date, PennDOT has issued approximately 1.6 million REAL ID products.

REAL ID is a federal law that affects how states issue driver's licenses and ID cards if they are going to be acceptable for federal purposes, such as boarding a domestic flight or entering a federal building that requires federally acceptable ID upon entry. A federally acceptable form of identification (whether it's a Pennsylvania REAL ID driver's license or ID card, a valid U.S. Passport/Passport Card, a military ID, etc.) must be used for these purposes on and after May 3, 2023.

There is no requirement that any resident obtain a REAL ID; PennDOT continues to offer standard-issue driver's licenses and photo IDs.

"Although a year seems like a long time to get ready, the deadline will be upon us before you know it. We encourage our customers who want a REAL ID to get one as soon as possible," said PennDOT Acting Executive Deputy Secretary Melissa Batula. "We continue to focus on providing the best possible customer service to all of our customers as the federal deadline approaches."

Since March 1, 2019, PennDOT has processed about 8.3 million customers, with more than 1.6 million individuals choosing to opt into the REAL ID program. The remaining 6.7 million have chosen not to participate or use an alternative federally acceptable form of ID come the May 2023 deadline.

"We see plenty of travelers who reside in neighboring Delaware and New Jersey who fly out of Philadelphia International Airport regularly, and like all travelers from out-of-state who want to fly after May 3, 2023, they also will need to have a REAL ID compliant driver's license or other acceptable form of ID when they approach our TSA travel document podium," said TSA Federal Security Director Gerardo Spero. "The REAL ID law is for all Americans who want to fly out of any domestic airport across the country starting one year from now. My advice is to go to your local state's department of motor vehicles or department of transportation to get your upgraded REAL ID driver's license now. Don't wait."

Customers can obtain a REAL ID by presenting documents for verification and processing at any driver license center. Federal regulations require that to be issued a REAL ID-compliant product, PennDOT must verify the below documents:

- **Proof of Identity:** Examples include original or certified copy of a birth certificate filed with the State Office of Vital Records/Statistics with a raised seal/embossed or valid, unexpired, U.S. Passport;
- **Proof of Social Security Number:** Social security card, in current legal name;
- **Two Proofs of Current, Physical PA Address:** Examples include a current, unexpired PA driver's license or identification card, vehicle registration or a utility bill with the same name and address; and
- **Proof of all Legal Name Changes** (if current legal name is different than what is reflected on proof of identity document): Examples include a certified marriage certificate(s) issued by the County Court for each marriage, court order(s) approving a change in legal name or amended birth certificate issued by the State Office of Vital Records/Statistics. If current name is the same as what is reflected on proof of identity document (usually birth certificate or passport), a customer does not need to show proof of legal name changes.

Customers have three options for obtaining a REAL ID product: Customers may order their REAL ID online if they have been pre-verified and their REAL ID product will be mailed to them within 15 business days; they can visit any PennDOT driver license center that is open for driver license services, have their documents verified and imaged, and their REAL ID product will be mailed to them within 15 business days; or they can visit one of 13 REAL ID Centers and receive their REAL ID product over the counter at the time of service.

When a customer gets their first REAL ID product, they pay a one-time fee of \$30, plus the applicable renewal fee (current renewal fee is \$30.50 for a four-year non-commercial driver's license, and \$31.50 for a photo ID). The expiration date of their initial REAL ID product will include any time remaining on their existing non-REAL ID product, plus an additional four years, unless the customer is over 65 and has a two-year license. This expiration date structure means that customers won't "lose" time that they've already paid for. After the initial REAL ID product expires, customers pay no additional fee, beyond regular renewal fees, to renew a REAL ID product.

REAL ID-compliant products are marked with a gold star in the upper right corner, standard-issue (non-compliant) products include the phrase "NOT FOR REAL ID PURPOSES," per federal regulations. Sample images can be viewed on [PennDOT's website](#).

More information about REAL ID in Pennsylvania, including [frequently asked questions](#) and information on [documents required for REAL ID](#), can be found at www.penndot.gov/REALID.